

Docket No.: 53674-015



PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

: **RESPONSE UNDER 37 CFR 1.116**

Hitoshi SUMIYA, et al.

: **EXPEDITED PROCEDURE**

Serial No.: 09/462,876

: Group Art Unit: 1755

Filed: January 18, 2000

: Examiner: K. Group

For: CUTTING TOOL OF A CUBIC BORON NITRIDE SINTERED COMPACT

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**AMENDMENT UNDER 37 CFR §1.116**

Box AF  
Commissioner for Patents  
Washington, DC 20231

Sir:

The following Amendment and Remarks are submitted in response to the Office Action dated October 22, 2001, pursuant to the provisions of 37 C.F.R. §1.142(b).

**IN THE CLAIMS:**

Please amend claims 1 and 9 as follows:

1. (Twice Amended) A cutting tool comprising, as an edge part, a cubic boron nitride sintered compact containing cubic boron nitride having an average grain diameter of at most 1  $\mu\text{m}$ , in which the cubic boron nitride sintered compact has, at the said edge part, an  $I_{(200)}$ ,  $I_{(111)}$  of (220) diffraction intensity ( $I_{(200)}$  to (111) diffraction intensity  $I_{(111)}$  ratio of at least 0.05 in X-ray diffraction of arbitrary direction and impurities are substantially not contained in the grain boundaries, wherein the traverse rupture strength of the said cubic boron nitride sintered compact is at least 80  $\text{kgf/mm}^2$  by a three point bending measurement at a temperature between 20°C and